

This document provides pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a minor, industrial permit. The discharge results from petroleum bulk terminal operations. This permit action consists of updating the proposed effluent limits to reflect the current Virginia Water Quality Standards, effective 6 January 2011, and updating permit language as appropriate. The effluent limitations and special conditions contained within this permit will maintain the Water Quality Standards of 9VAC25-260 et seq.

1. Facility Name and Mailing Address: Sunoco Partners Marketing & Terminals, L.P.
Manassas Terminal
10315 Balls Ford Road
Manassas, VA 20109
SIC Code: 5171

Facility Location: 10315 Balls Ford Road
Manassas, VA 20109
County: Prince William

Facility Contact Name: John Humphreys / Terminal Manager
Telephone Number: 703-368-9055
Facility Email Address: Jdhumphreys@sunocologistics.com
2. Permit No.: VA0087858
Expiration Date: 10 May 2015
Other VPDES Permits: Not Applicable
Other Permits: Registration No. 70235 – DEQ-NRO Air Permit
VAR0000015883 – RCRA (Hazardous Waste)
ID 3011021 – UST/AST Petroleum tank registration
E2/E3/E4 Status: Not Applicable
3. Owner Name: Sunoco Partners Marketing & Terminals, L.P.
Owner Contact / Title: John Humphreys / Terminal Manager
Telephone Number: 703-368-9055
Owner Email Address: Jdhumphreys@sunocologistics.com
4. Application Complete Date: 4 February 2015
Permit Drafted By: Douglas Frasier
Date Drafted: 26 June 2015
Draft Permit Peer Review By: Beth Biller
Date Reviewed: 29 June 2015
Draft Permit Review By: Alison Thompson
Date Reviewed: 6 July 2015
Public Comment Period: Start Date: September 12, 2015
End Date: October 13, 2015
5. Receiving Waters Information: See **Attachment 1** for the Flow Frequency Determination.
Receiving Stream Name: Bull Run, UT
Stream Code: 1aXEF
Drainage Area at Outfalls: 0.08 square miles
River Mile: 0.13
Stream Basin: Potomac River
Subbasin: None
Section: 7a
Stream Class: III
Special Standards: g
Waterbody ID: VAN-A21R
7Q10 Low Flow: 0.0 MGD*
7Q10 High Flow: Not Applicable**
1Q10 Low Flow: 0.0 MGD*
1Q10 High Flow: Not Applicable**
30Q10 Low Flow: 0.0 MGD*
30Q10 High Flow: Not Applicable**
Harmonic Mean Flow: 0.0 MGD*
30Q5 Flow: Not Applicable**

*Due to the small (<1 sq. mile) drainage area at the Outfalls, it is staff's best professional judgement that the critical flows of the receiving stream would be zero.

**The flow within the receiving stream would be highly variable during a wet weather event; dependent upon the previous precipitation event, amount/type of precipitation and longevity of the event. A mixing zone determination is not feasible.

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 2 of 13

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

☒ State Water Control Law
☒ Clean Water Act
☒ VPDES Permit Regulation
☒ EPA NPDES Regulation

☐ EPA Guidelines
☒ Water Quality Standards
☒ Other: 9VAC25-120 et seq.

General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests

7. **Licensed Operator Requirements:** Not Applicable

8. **Reliability Class:** Not Applicable

9. Facility / Permit Characterization:

<input checked="" type="checkbox"/> Private	<input checked="" type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule
<input type="checkbox"/> State	<input checked="" type="checkbox"/> Whole Effluent Toxicity Program	<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> Water Treatment Plant	<input type="checkbox"/> Pretreatment Program	<input type="checkbox"/> Interim Limits in Other Document
<input checked="" type="checkbox"/> eDMR Participant	<input checked="" type="checkbox"/> Total Maximum Daily Load (TMDL)	

10. Wastewater Sources and Treatment Description:

Sunoco operates a petroleum product distribution terminal on Balls Ford Road in Manassas, Virginia. This terminal receives petroleum products (several grades of gasoline and home heating oil) from the Colonial Pipeline. They are stored in nine (9) above ground storage tanks (ASTs) that are located within dike areas on the property. Capacities of tanks are provided in **Attachment 3**. Products are loaded onto transport trucks at a covered loading rack for retail distribution.

OUTFALL 001

This outfall was previously the only external outfall at this facility. In 2004 the flows from the original dike area, the roof of the loading rack and a portion of the parking area were diverted with PVC piping. The PVC pipe discharged at the same location as Outfall 001 and was designated as Outfall 002 in the previous reissuance. Flows were diverted around the pond so it could be drained because Colonial Pipeline needed to conduct work adjacent to the pond's berm.

Upon completion of the above work, Sunoco decided to create a second dike area where the pond was previously located. Two new ASTs were installed; T-21 and T-22 (see **Attachment 3**). Outfall 001 is the designated discharge point for this new tank containment area.

OUTFALL 002

As previously stated, this was a new permitted Outfall for this facility during the previous reissuance. It was created to divert flows around the pond. The majority of the flow from the property is discharged through this Outfall. Flows include stormwater from the original dike area, the roof of the loading rack and a portion of the paved parking area.

ACTIVITY DESCRIPTIONS

AST Dike Areas: Nine (9) ASTs are located in graveled dike areas; the seven (7) original and two (2) new tanks located at the former pond location. Stormwater collects via gravity to the lowest point and is visually inspected prior to discharging the stormwater through Outfall 001 and Outfall 002.

Loading Rack: The rack has four loading bays. Wash water and any spills in the loading rack area drain to holding tanks. The contaminated waters in the two 20,000 gallon holding tanks are trucked offsite for recovery and disposal. The loading rack is equipped with a fire suppression system. This system requires annual testing with a small amount of foam included.

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 3 of 13

Truck Washing: Exterior truck washing is done at the facility; typically on a weekly basis. The storm drain is covered and the wash water is collected with a vacuum into a tank mounted on a trailer. The wash water is hauled to the Upper Occoquan Service Authority Wastewater Treatment Plant (VA0024988) for final disposal.

INTERNAL OUTFALL 101

Hydrostatic Test Waters: This outfall was included in previous permit terms and was designated for hydrostatic testing as needed. This facility has not conducted a test since 1997 but has maintained this outfall in case it is needed. The permittee has requested that this outfall be removed during this reissuance. If a test is required, the permittee will obtain coverage under *General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests* (9VAC25-120). The limitations and requirements for this outfall, if it were to remain, would reflect those found under the General Permit; therefore, antibacksliding is not applicable.

See **Attachment 2** for the NPDES Permit Rating Worksheet.

See **Attachment 3** for a facility schematic/diagram.

TABLE 1 OUTFALL DESCRIPTION				
Number	Discharge Sources	Treatment	Average 30-day Flow	Latitude / Longitude*
001	Industrial Stormwater	See Section 10	Variable Flows Rainfall Dependent	38° 47' 56" / 77° 30' 14"
002	Industrial Stormwater	See Section 10		
See Attachment 4 for the Gainesville topographic map.				
*Outfalls 001 and 002 are adjacent to one another; each discharging from a separate dike area.				

11. Solids Treatment and Disposal Methods:

This is an industrial facility that stores and distributes fuel products. The facility does not generate nor treat domestic sewage sludge.

12. Permitted Discharges Located Within Waterbody VAN-A21R:

TABLE 2 PERMITTED DISCHARGES			
Permit Number	Facility Name	Type	Receiving Stream
VA0087891	Evergreen Country Club	Municipal Discharge Individual Permit	Chestnut Lick, UT
VA0085901	IBM Corporation	Industrial Discharge Individual Permit	Flat Branch, UT
VAG110070	Aggregate Industries MAR – Manassas	Concrete Products General Permits	Youngs Branch
VAG110074	Titan Virginia Ready Mix LLC – Centreville		Bull Run, UT
VAG110100	Virginia Concrete Company Inc. – Gainesville		Rocky Branch, UT
VAR050995	Dept. of Public Works – City of Manassas	Stormwater Industrial General Permits	Flat Branch, UT
VAR052190	M and F Concrete Inc.		Youngs Branch, UT
VAR051011	Superior Paving Corp. – Centreville		Bull Run, UT

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 4 of 13

TABLE 2 (continued)			
Permit Number	Facility Name	Type	Receiving Stream
VAG840089	Luck Stone – Bull Run	Non Metallic Mineral Mining General Permit	Bull Run, UT
VAG406230	Regis Gregory G Residence	Small Municipal ≤ 1,000 gpd General Permits	Chestnut Lick, UT
VAG406549	Hebner Brian and Vaitsheshyna Katsiaryna Residence		Black Branch, UT
VAG406165	Neal Bobby Residence		Little Bull Run, UT
VAG406481	Sudley Nursery and Garden Center		Bull Run
VAG406099	Cole James C Residence		Bull Run, UT
VAG406109	Sudley United Methodist Church		Little Bull Run
VAG406315	Shaw Robert Residence		Black Branch, UT
VAG406406	Galleher Jr Thomas - Residence		Chestnut Lick, UT
VAG406295	Gutenson Otto Residence		Bull Run, UT
VAG406435	Air Tech Solutions Sudley Rd Residence		Little Bull Run, UT
VAG406281	Boggs Bradley and Kathryn Residence		Chestnut Lick, UT
VAG406272	Cook Donald E Sr Residence		Bull Run, UT
VAG406133	Leet Christopher J Residence		Little Bull Run, UT
VAG406236	Coleman Robert Residence		Bull Run, UT
VAG406240	Evergreen Volunteer Fire Department		Chestnut Lick, UT
VAG406494	Thompson Angela J Residence		Chestnut Lick, UT
VAG406475	Siddiqui Assadullah Residence		Bull Run Creek
VAG406467	Neely William Residence		Bull Run, UT
VAG406410	Streufert Jonathon and Maria Residence		Bull Run UT
VAG406094	Hunter Josiah Residence		Bull Run, UT
VAG406273	Casson Robert A Residence		Bull Run, UT
VAG406162	Darne Jackie L - Residence		Chestnut Lick, UT
VAG406078	Mullins Lisa A Residence		Occoquan River, UT
VAG406330	Hall Ronald W Residence		Bull Run, UT
VAG406076	Tinder W Michael Sr Residence		Chestnut Lick, UT
VAG406329	Oviatt Stephen Residence		Bull Run UT
VAG406461	Deutsch Karen		Lick Branch, UT
VAG406065	Katsaris Richard Residence		Little Bull Run, UT
VAG406411	Warren Faye Residence		Chestnut Lick, UT
VAG406298	Watt Robert Residence		Little Bull Run, UT
VAG406300	Pumphrey W Gavin Residence		Bull Run, UT
VAG406009	Carrington Charles M Residence		Chestnut Lick, UT

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 5 of 13

TABLE 2 (continued)			
Permit Number	Facility Name	Type	Receiving Stream
VAG406367	Nason Noah - Residence	Small Municipal ≤ 1,000 gpd General Permits	Youngs Branch, UT
VAG406209	Evergreen Center - Residence		Chestnut Lick, UT
VAG406242	Lake Jackson Drive Community Residences		Cabin Branch, UT
VAG406157	Thaggard David H Residence		Broad Run - UT

13. Material Storage:

TABLE 3 MATERIAL STORAGE		
Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
Gasoline / Additives	Approximately 11,900,000 gallons	Secondary containment, daily facility walk around inspections, training of personnel, prompt repair of equipment and spill cleanup.
Distillates	Approximately 2,300,000 gallons	
Ethanol	Approximately 675,000 gallons	

14. Site Inspection:

Performed by DEQ-NRO Compliance Staff on 29 March 2013; please refer to **Attachment 5** for the inspection report.

15. Receiving Stream Water Quality and Water Quality Standards:**a. Ambient Water Quality Data**

This facility discharges to an unnamed tributary to Bull Run that is designated by the stream code XEF and has not been monitored or assessed.

Bull Run (BUL) is located approximately 0.8 miles downstream from Outfalls 001 and 002. The nearest downstream monitoring station is located within this segment of Bull Run; however, it is a DEQ fish tissue/sediment monitoring station that has not been monitored since the 2010 assessment.

The following is the water quality summary for this segment of Bull Run, as taken from the 2012 Integrated Report:

- Class III, Section 7a, special standards g.

DEQ monitoring stations located in this segment of Bull Run:

- Fish tissue/sediment monitoring station 1aBUL013.40, near the Bull Run Recreation Area.

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, polychlorinated biphenyl (PCB) fish consumption advisory.

The aquatic life use is considered fully supporting.

The recreation and wildlife uses were not assessed.

(The remainder of this page intentionally left blank)

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 6 of 13

The nearest DEQ station with ambient monitoring data is located within a segment of Bull Run that begins approximately 2.7 miles downstream from the outfalls. The following is the water quality summary for this segment of Bull Run, as taken from the 2012 Integrated Report:

- Class III, Section 7a, special standards g.

DEQ monitoring stations located in this segment of Bull Run:

- Freshwater probabilistic monitoring station 1aBUL009.61, downstream from Route 28;
- Ambient and biological monitoring station 1aBUL010.28, at Route 28; and
- Biological station 1aBUL011.12, at upstream of Route 616.

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. Additionally, an exceedance of the fish tissue value (TV) of 12 ppb for heptachlor epoxide that occurred in one species (flathead catfish) in 2001 at monitoring station 1aBUL010.28, noted by an observed effect. An observed effect is also noted for an exceedance of the fish tissue value (TV) of 110 ppb for total chlordane that occurred in one species (carp) in 2004.

Biological monitoring finds a benthic macroinvertebrate impairment, resulting in an impaired classification for the aquatic life use. A benthic TMDL for the Bull Run has been completed and approved.

The recreation and wildlife uses are considered fully supporting.

b. 303(d) Listed Stream Segments and Total Maximum Daily Loads (TMDLs)

TABLE 4 RECEIVING STREAM 303(d) IMPAIRMENTS AND TMDLs					
Waterbody Name	Impaired Use	Cause	TMDL Completion/Schedule	WLA	Basis for WLA
<i>Impairment Information in the 2012 Integrated Report</i>					
Bull Run	Fish Consumption	PCBs	2018	---	---
	Aquatic Life	Benthic Macroinvertebrates	Bull Run Sediment 26 September 2006	5.8 tons sediment/year*	TSS concentration 60 mg/L --- 0.06347 MGD
Occoquan Reservoir	Aquatic Life	Dissolved Oxygen	**	---	---
Occoquan River	Recreation	<i>E. coli</i>	2016	---	---

*Note that the 2009 Planning Statement for this facility erroneously included a WLA of 1.62 tons sediment/year, which corresponds to the stormwater WLA for this facility, as shown in Table D-1 in the TMDL document. The WLA for this facility's outfalls is 5.8 tons sediment/year, as shown in Table 7-1 in the TMDL document.

**A TMDL is not required for the Occoquan Reservoir dissolved oxygen impairment because other pollution control requirements are reasonably expected to result in the attainment of the dissolved oxygen criteria.

(The remainder of this page intentionally left blank)

This facility discharges to an unnamed tributary to Bull Run in the Chesapeake Bay watershed in the Potomac River Basin. The receiving stream has been addressed in the Chesapeake Bay Total Maximum Daily Load (TMDL); approved by the Environmental Protection Agency (EPA) on 29 December 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tidal tributaries by establishing non-point source load allocations (LAs) and point-source waste load allocations (WLAs) for total nitrogen (TN), total phosphorus (TP) and total suspended solids (TSS) to meet applicable Virginia Water Quality Standards contained within 9VAC25-260-185.

The Chesapeake Bay TDML implementation is currently administered in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP); approved by EPA on 29 December 2010. The approved WIP recognizes the *General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia*, 9VAC25-820 et seq., as governing the nutrient allocations for non-significant Chesapeake Bay dischargers. Nutrient WLAs for non-significant industrial facilities were based on estimated TN and TP load levels obtained from Discharge Monitoring Report data and typical effluent concentrations established by Standard Industrial Classification (SIC) codes.

The TN and TP wasteload allocations contained within the WIP are considered aggregate allocations. Per current agency guidance, monitoring of TN and TP will be required during this permit term to verify the estimated facility nutrient loads and the subsequent aggregate wasteload allocations.

As noted in the planning statement, exceedances were found in fish tissue for heptachlor epoxide and total chlordane in 2001 and 2004, respectively. Chlordane was utilized as a pesticide on food crops until 1978 and then as a control measure for termites around residential home basements until 1988 when its approval for use was cancelled. Heptachlor is a constituent of technical grade chlordane and was utilized until 1974 when all registered uses were canceled. It is staff's best professional judgement that neither of these pollutants would be present in this discharge given the nature of operations at this facility and the aforementioned past uses of these chemicals prior their use approval cancellations.

The planning statement may be found in **Attachment 6**.

c. Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, unnamed tributary to Bull Run, is located within Section 7a of the Potomac River Basin and classified as III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32° C and maintain a pH of 6.0 – 9.0 standard units (S.U.).

The calculated Water Quality Criteria are dependent on the pH, temperature and total hardness of the receiving stream and/or final effluent. Default values, per the current Permit Manual, were utilized where data was not available. Please refer to **Attachment 7** for the criterion.

d. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, unnamed tributary to Bull Run, is located within Section 7a of the Potomac River Basin. This section has been designated with a special standard of "g".

Special Standard "g" refers to the Occoquan Watershed policy (9VAC25-410). The regulation sets stringent treatment and discharge requirements in order to improve and protect water quality, particularly since the waters are an important water supply for Northern Virginia. The regulation generally prohibits new sewage treatment plants and only allows minor industrial discharges.

This policy is not applicable to this facility as the limitations set forth within the Policy pertain to wastewater treatment plant effluent quality.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on surrounding industrial activity and development and the noted downstream fish consumption and benthic impairments noted Section 15 of this Fact Sheet. It is staff's best professional judgment that such streams are Tier 1 since the limits and monitoring requirements are set to maintain the Water Quality Standards. The proposed permit limits and monitoring requirements have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria applicable to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLAs) are calculated. In this case since the critical flows have been determined to be zero, the WLAs are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Effluent data obtained from June 2010 to September 2014 Discharge Monitoring Reports (DMRs) and the permit reissuance application has been reviewed and determined to be suitable for evaluation. Please see **Attachment 8** for a summary of effluent data.

b. Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:

WLA	=	Wasteload allocation
C _o	=	In-stream water quality criteria
Q _e	=	Design flow
Q _s	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria; and 30Q5 for non-carcinogen human health criteria)
f	=	Decimal fraction of critical flow
C _s	=	Mean background concentration of parameter in the receiving stream.

Since the amount of flow present in the receiving stream could vary greatly during a discharge event, it is staff's best professional judgement that determination of a mixing zone is not possible and the critical flows have been determined to be 0.0 MGD. In addition, a discharge is unlikely to occur during a wet weather event due to standard operating procedures prior to manually discharging the stormwater from the dike areas (see Section 10 *ACTIVITY DESCRIPTIONS*). Therefore, the WLA will be equal to the C_o to ensure that the water quality criteria are maintained at all times.

c. Effluent Limitations, Outfalls 001 and 002 – Toxic Pollutants

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

Total Petroleum Hydrocarbon (TPH):

It is proposed that the technology-based limit of 15 mg/L for total petroleum hydrocarbons be carried forward with this reissuance. This limit is applicable for discharges where contamination is from petroleum products other than gasoline; which this facility does have quantities on site. Wastewater that is discharged without a visible sheen is generally expected to meet this effluent limitation.

d. Effluent Limitations and Monitoring, Outfalls 001 and 002 – Conventional and Non-Conventional Pollutants

No changes to total suspended solids (TSS) and pH limitations are proposed.

pH limitations are set at the water quality criteria.

Staff proposes that total nitrogen and total phosphorus monitoring be included with this reissuance at a frequency of once per six months (1/6M) for a total of four (4) sampling events; reflecting current agency guidance to verify assumptions made while developing the watershed implementation plan (WIP) for the Chesapeake Bay TMDL.

e. Effluent Limitations and Monitoring Summary

The effluent limitations are presented in the Section 19 of this Fact Sheet. Limitations were established for total petroleum hydrocarbons (TPH), pH and total suspended solids. Monitoring requirements were established for total Kjeldahl nitrogen (TKN), nitrate+nitrite, total nitrogen and total phosphorus.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual and agency guidance.

18. Antibacksliding:

As stated in Section 10 of this Fact Sheet, Outfall 101 has been removed with this reissuance. The purpose of this outfall was to monitor constituents during a hydrostatic test. These tests are rather infrequent and the permittee has the option for coverage under the *General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests* as needed when a hydrostatic test is required. Limitations that would be imposed within this Individual Permit would have reflected those found in the aforementioned General Permit. Therefore, antibacksliding is not applicable with this permitting action.

(The remainder of this page intentionally left blank)

VPDES PERMIT PROGRAM FACT SHEET

VA0087858
PAGE 10 of 13

19. Effluent Limitations/Monitoring Requirements for Outfall 001 and Outfall 002:

Flows from these Industrial Outfalls are variable; rainfall dependent.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/Q ^(d)	Estimate
pH	3	NA	NA	6.0 S.U.	9.0 S.U.	1/Q ^(d)	Grab
Total Suspended Solids (TSS) ^(a)	2,3,4,5	NA	NA	NA	60 mg/L	1/Q ^(d)	Grab
Total Petroleum Hydrocarbons (TPH) ^(b)	2,6	NA	NA	NA	15 mg/L	1/Q ^(d)	Grab
Total Kjeldahl Nitrogen (TKN)	4,7	NA	NA	NA	NL mg/L	1/6M ^{(e) (f) (g)}	Grab
Nitrate+Nitrite, as N	4,7	NA	NA	NA	NL mg/L	1/6M ^{(e) (f) (g)}	Grab
Total Nitrogen ^(c)	4,7	NA	NA	NA	NL mg/L	1/6M ^{(e) (f) (g)}	Calculated
Total Phosphorus	4,7	NA	NA	NA	NL mg/L	1/6M ^{(e) (f) (g)}	Grab
Acute Toxicity – <i>C. dubia</i> (NOAEC)	8	NA	NA	NA	NL %	1/YR ^(h)	Grab

The basis for the limitations codes are:

MGD = Million gallons per day.

1/Q = Once every calendar quarter.

1. Federal Effluent Requirements

NA = Not applicable.

1/6M = Once every six months.

2. Best Professional Judgement

NL = No limit; monitor and report.

1/YR = Once every calendar year.

3. Water Quality Standards

S.U. = Standard units.

4. Chesapeake Bay TMDL/WIP

5. Bull Run Benthic TMDL

6. 9VAC25-120 – *General VPDES Permit Regulation for Discharges from Petroleum Sites, Groundwater Remediation and Hydrostatic Tests*

7. Guidance Memo No. 14-2011 – *Nutrient Monitoring for "Nonsignificant" Discharges to the Chesapeake Bay Watershed*

8. Guidance Memo No. 00-2012 – *Toxics Management Program Implementation Guidance*

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

^(a) TSS shall be expressed as two (2) significant figures.

^(b) Total Petroleum Hydrocarbons (TPH) is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2000) or EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2007).

^(c) Total Nitrogen = sum of TKN plus Nitrate+Nitrite.

^(d) The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

^(e) See Section 23 of this Fact Sheet

^(f) The semiannual monitoring periods shall be January through June and July through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

^(g) Monitoring and reporting are only required during the first two years of the permit term (i.e. four sampling periods).

^(h) Whole Effluent Toxicity (WET) tests shall be conducted to reflect seasonal variation. See Section 20.b. of this Fact Sheet.

(The remainder of this page intentionally left blank)

20. Other Permit Requirements:

- a. Permit Section Part I.B. contains quantification levels and compliance reporting instructions

9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an instream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

- b. Permit Section Part I.C. details the requirements for Whole Effluent Toxicity (WET) Program

The VPDES Permit Regulation at 9VAC25-31-210 requires monitoring and 9VAC25-31-220.I, requires limitations in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. A WET Program is imposed for industrial facilities determined by the Board based on effluent variability, compliance history, instream waste concentration (IWC) and receiving stream characteristics.

Bulk petroleum storage facilities often contain an exceptionally wide variety of pollutants that may be present in toxic amounts. It is unfeasible to identify all potential toxic pollutants by individual chemical methods. Utilizing an integrated approach consisting of both biological and chemical methods to address potential toxic pollutants ensures that the receiving waters are protected at all times.

Past WET results have indicated that the effluent is not toxic to the test species. See **Attachment 9** for a summary of the past test results. **Attachment 10** details the statistical evaluation of the previous WET results indicating that no limit is warranted. **Attachment 11** documents the calculated endpoints that will be carried forward with this reissuance.

The permittee will be required to conduct WET testing that reflects seasonal variations during this permit term. The monitoring periods for each calendar year will reflect a different calendar quarter in which to conduct sampling. This will ensure that toxic pollutants are not discharged in toxic amounts at all times.

21. Other Special Conditions:

- a. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; VPDES Permit Regulation, 9VAC25-31-190.E and 40 CFR 122.41(e). The permittee shall maintain a current Operations and Maintenance (O&M) Manual. The permittee shall operate the facility in accordance with the O&M Manual and shall make the O&M Manual available to Department personnel for review upon request. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b. Notification Levels. Required by VPDES Permit Regulation, 9VAC25-31-200.A. for existing manufacturing, commercial, mining and silvicultural dischargers. The permittee shall report discharges of toxic pollutants not limited by this permit that exceed notification levels.
- c. Materials Handling/Storage. 9VAC25-31-50.A. prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- d. Water Quality Criteria Reopener. The VPDES Permit Regulation at 9VAC25-31-220.D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.
- e. Polychlorinated biphenyl (PCB) Monitoring. This special condition requires the permittee to conduct PCB monitoring using ultra-low level PCB analysis to support the development of the PCB TMDL for the fish consumption use impairment as noted in 2012 impairment for Bull Run.

VPDES PERMIT PROGRAM FACT SHEET

VA0087858

PAGE 12 of 13

- f. Oil Storage Groundwater Monitoring Reopener. As this facility currently manages groundwater in accordance with 9VAC25-90-10 et seq., Oil Discharge Contingency Plans and Administration Fees for Approval, this permit does not presently impose groundwater monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include groundwater monitoring not required by the ODCP regulation.
- g. Total Maximum Daily Load (TMDL) Reopener. Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under section 303 of the Act.

22. Permit Section Part II:

Required by VPDES Regulation 9VAC25-31-190, Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Permit Section Part III:

Part III of the permit contains conditions and requirements for stormwater pollution prevention. The permittee will be required to review and modify, as warranted, to ensure that the current facility stormwater pollution prevention plan complies with the requirements as set forth. In addition, specific instructions are included for the nutrient monitoring that is being required for nonsignificant dischargers located within the Chesapeake Bay watershed as permits are reissued. The reported data will be utilized to verify assumptions made during the development of the watershed implementation plan.

24. Changes to the Permit from the Previously Issued Permit:

a. Special Conditions:

- The Hydrostatic Testing special condition which required prior notification to DEQ was removed with this reissuance since the outfall was removed and coverage will be obtained under the General Permit as warranted.
- Polychlorinated biphenyl monitoring was included with this reissuance due to the noted downstream impairment and verification if facility is a potential source.

b. Monitoring and Effluent Limitations:

- Outfall 101, Hydrostatic Testing, was removed with this reissuance. The permittee may obtain coverage under the General Permit which has the same limitations and requirements as would be imposed if the outfall were to remain within this permit.
- Monitoring for nutrients were included to verify assumptions made and subsequent aggregate loads found within the Watershed Implementation Plan for the Chesapeake Bay TMDL; per agency guidance for nonsignificant discharges.

25. Variances/Alternate Limits or Conditions:

Not Applicable

26. Public Notice Information:

First Public Notice Date: September 11, 2015

Second Public Notice Date: September 17, 2015

Public Notice Information is required by 9VAC25-31-280.B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office; 13901 Crown Court; Woodbridge, VA 22193; Telephone No. 703-583-3873, Douglas.Frasier@deq.virginia.gov. See Attachment 12 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action and may request a public hearing, during the comment period. Comments shall include the name, address and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

27. Additional Comments:

Previous Board Action(s):	Not applicable.
Staff Comments:	The permit was not reissued prior to the expiration date due to Department processing delays.
State/Federal Agency Comments:	VDH had no comments regarding the reissuance of this permit.
Public Comments:	No comments were received during the public notice.
Owner Comments:	No comments.

Fact Sheet Attachments

Table of Contents

Sunoco Partners Marketing & Terminals, L.P. – Manassas Terminal
VA0087858
2015 Issuance

Attachment 1	Flow Frequency Determination
Attachment 2	NPDES Permit Rating Worksheet
Attachment 3	Facility Schematic/Diagram
Attachment 4	Topographic Map
Attachment 5	2013 Inspection Report
Attachment 6	Planning Statement
Attachment 7	Water Quality Criteria / Wasteload Allocation Analysis
Attachment 8	June 2010 – September 2014 Effluent Data
Attachment 9	Whole Effluent Toxicity Test Result Summaries
Attachment 10	Statistical Analysis of Previous WET Results
Attachment 11	Calculated Compliance Endpoints for WET Requirements
Attachment 12	Public Notice

ATTACHMENT 1

Flow Frequency Determination

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Office of Water Quality Assessments

629 East Main Street P.O. Box 10009 Richmond, Virginia 23219

SUBJECT: Flow Frequency Determination
Mobile Oil Company, Manassas Terminal - #VA0087858

TO: Jim Olson, NRO

FROM: Paul E. Herman, P.E., WQAP *Paul*

DATE: July 21, 1999

COPIES: Ron Gregory, Charles Martin, File

RECEIVED
JUL 22 1999

Northern VA. Region
Dept. of Env. Quality

Mobile Oil Company - Manassas Terminal discharges to an unnamed tributary of the Bull Run near Sudley, Virginia. Flow frequencies are required at this site for use by the permit writer in developing the VPDES permit.

The flow frequencies for the discharge receiving stream were determined by inspection of the USGS Gainesville Quadrangle topographic map. The map depicts the stream as intermittent. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, high flow 1Q10, high flow 7Q10, and harmonic mean.

If you have any questions concerning this analysis, please let me know.

ATTACHMENT 2

NPDES Permit Rating Worksheet

NPDES PERMIT RATING WORK SHEET

- ☒ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status Change
☐ Deletion

VPDES NO. : VA0087858

Facility Name: Sunoco Partners Marketing & Terminals, L.P. – Manassas Terminal
 City / County: Manassas / Prince William County
 Receiving Water: Bull Run, UT
 Waterbody ID: VAN-A21R

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
 2. A nuclear power Plant
 3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

- ☐ YES; score is 700 (stop here)
☒ NO; (continue)

☐ Yes; score is 600 (stop here) ☒ NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 5171 Other Sic Codes: _____
 Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input checked="" type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 8
 Total Points Factor 1: 40

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input checked="" type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50%	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input type="checkbox"/> 53	30

Code Checked from Section A or B: 31
 Total Points Factor 2: 0

NPDES PERMIT RATING WORK SHEET

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one)

☐

BOD

☐

COD

☐

Other: _____

Permit Limits: (check one)

☐

< 100 lbs/day

☐

100 to 1000 lbs/day

☐

> 1000 to 3000 lbs/day

☐

> 3000 lbs/day

Code

1

2

3

4

Points

0

5

15

20

Code Number Checked: NAPoints Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

☒

< 100 lbs/day

☐

100 to 1000 lbs/day

☐

> 1000 to 5000 lbs/day

☐

> 5000 lbs/day

Code

1

2

3

4

Points

0

5

15

20

Code Number Checked: 1Points Scored: 0

C. Nitrogen Pollutants: (check one)

☐

Ammonia

☐

Other: _____

Permit Limits: (check one)

☐

Nitrogen Equivalent

< 300 lbs/day

☐

300 to 1000 lbs/day

☐

> 1000 to 3000 lbs/day

☐

> 3000 lbs/day

Code

1

2

3

4

Points

0

5

15

20

Code Number Checked: NAPoints Scored: 0Total Points Factor 3: 0**FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☒ YES; (If yes, check toxicity potential number below)☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input checked="" type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: 8Total Points Factor 4: 20

NPDES PERMIT RATING WORK SHEET

FACTOR 5: Water Quality Factors

- A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been assigned to the discharge?*

	Code	Points
<input checked="" type="checkbox"/> YES	1	10
<input type="checkbox"/> NO	2	0

- B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

	Code	Points
<input checked="" type="checkbox"/> YES	1	0
<input type="checkbox"/> NO	2	5

- C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

Code Number Checked: A 1 + B 1 + C 2
Points Factor 5: A 10 + B 0 + C 0 = 10

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) 31

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input type="checkbox"/> 3	3	30
<input checked="" type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.10 = 0

Enter the multiplication factor that corresponds to the flow code: 0.10

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

Code Number Checked: A 4 + B NA + C NA
Points Factor 6: A 0 + B 0 + C 0 = 0

NPDES PERMIT RATING WORK SHEET

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	40
2	Flows / Streamflow Volume	0
3	Conventional Pollutants	0
4	Public Health Impacts	20
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	0
TOTAL (Factors 1 through 6)		70

S1. Is the total score equal to or greater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

NEW SCORE: 70

OLD SCORE: 70

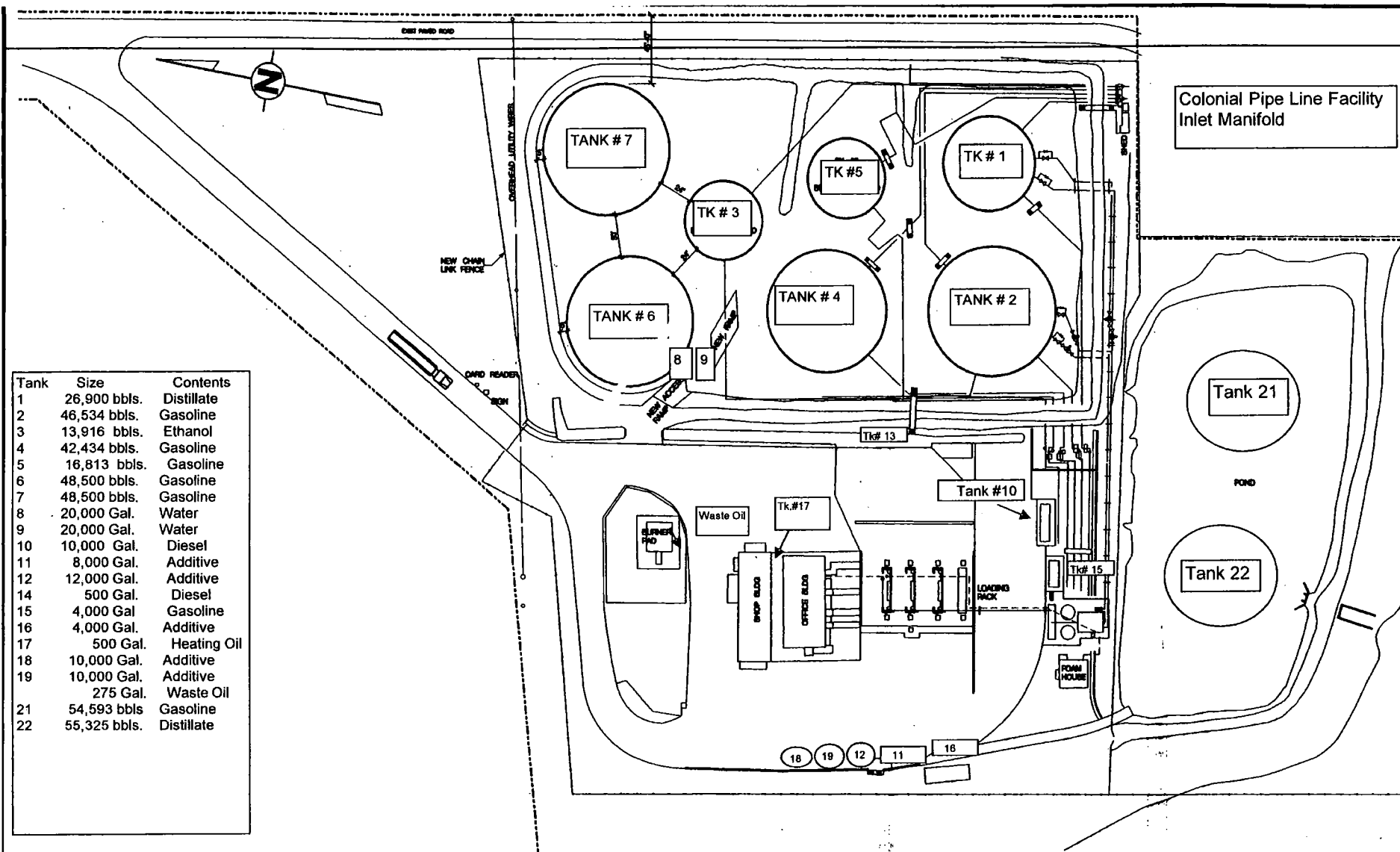
Permit Reviewer's Name: Douglas Frasier

Phone Number: 703-583-3873

Date: 25 June 2015

ATTACHMENT 3

Facility Schematic/Diagram

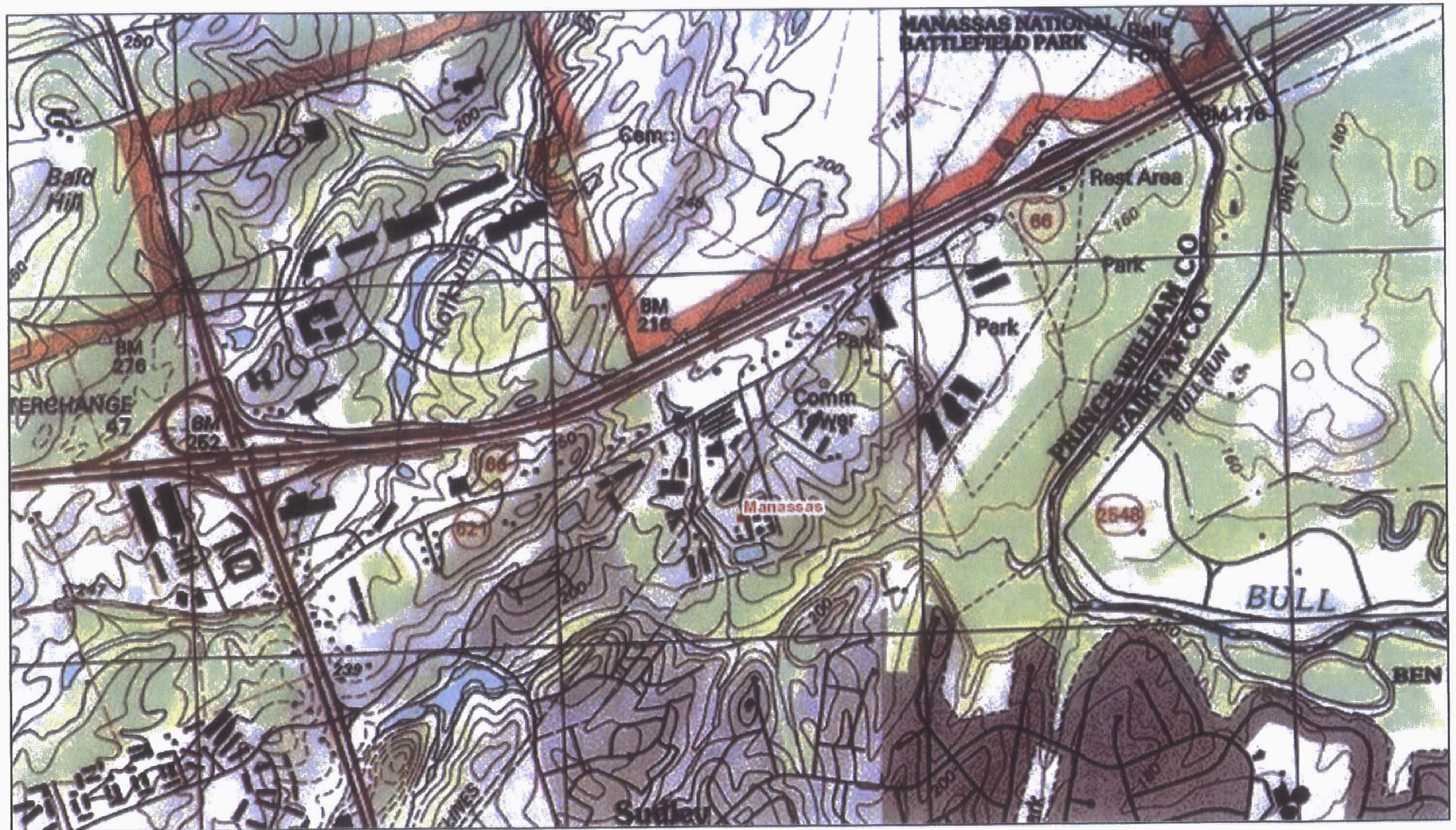


Sunoco Logistics L.P.
10315 Balls Ford Road
Manassas, Va. 20109

ATTACHMENT 4

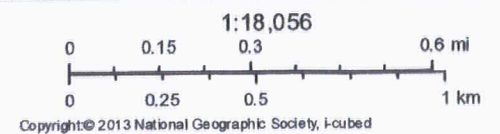
Topographic Map

Manassas Terminal



November 25, 2014

- MyGraphicsLayer Valve
- Pipeline Labels
- Facility Labels

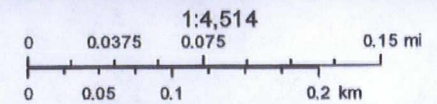


Manassas Terminal



November 25, 2014

- MyGraphicsLayer
- Pipeline Labels
- Facility Labels
- Valve



Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

ATTACHMENT 5

2013 Inspection Report



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800 Fax (703) 583-3821

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

April 26, 2013

John D. Humphreys
Terminal Manager
Sunoco Partners Marketing & Terminals
Manassas Terminal
10315 Balls Ford Road
Manassas, VA 20109

Re: **Sunoco – Manassas Terminal, Permit #VA0087858**

Dear Mr. Humphries:

Attached is a copy of the inspection report generated from the Facility Technical Inspection conducted at Sunoco – Manassas Terminal on March 29, 2013. This letter is not intended as a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* (APA).

Please review the enclosed report and submit in writing adequate documentation of all measures taken (including all necessary supporting documentation) to address the Request for Corrective Action no later than **May 27, 2013**.

Your response may be sent either via the US Postal Service or electronically, via E-mail. If you choose to send your response electronically, we recommend sending it as an Acrobat PDF or in a Word-compatible, write-protected format. Additional inspections may be conducted to confirm that the facility is in compliance with permit requirements.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Regional Office at (703) 583-3882 or by e-mail at Sharon.Allen@deq.virginia.gov.

Sincerely,

A handwritten signature in black ink that reads "Sharon Allen". The script is cursive and fluid, with the first letters of each name being capitalized and prominent.

Sharon Allen
Environmental Specialist II

Electronic copy sent:
Permits / DMR File, Compliance Manager – DEQ

DEQ
WASTEWATER FACILITY INSPECTION REPORT
PREFACE

VPDES/State Certification No.	(RE) Issuance Date	Amendment Date	Expiration Date
VA0087858	May 11, 2010		May 10, 2015
Facility Name	Address		Telephone Number
Sunoco – Manassas Terminal	10315 Balls Ford Road Manassas, VA 20109		703-368-9055
Owner Name	Address		Telephone Number
Sunoco Partners Marketing & Terminals L.P.	10315 Balls Ford Road Manassas, VA 20109		703-368-9055
Responsible Official	Title	Telephone Number	
John Humphreys	North Central PA-VA Complex Manager	703-368-9055	
Responsible Operator	Operator Cert. Class/number	Telephone Number	
John Humphreys	XXXX	703-368-9055	
TYPE OF FACILITY:			
DOMESTIC		INDUSTRIAL	
Federal	Major	Major	Primary
Non-federal	Minor	Minor	X Secondary X

EFFLUENT LIMITS: Outfall 001 and 002 once/quarter							
Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
pH, s.u.	6.0		9.0	TSS, mg/L	NA	NA	60
TPH, mg/L		NA	15				
Once per year							
Acute Toxicity – C. dubia TU_a		NA	NL				
	Receiving Stream			Bull Run, UT			
	Basin			Potomac River			
	Discharge Point (LONG)						
	Outfall 001			77° 30' 15"			
	Outfall 002			77° 30' 15"			
	Discharge Point (LAT)						
Outfall 001			38° 47' 57"				
Outfall 002			38° 47' 55"				

EFFLUENT LIMITS: Outfall 101 – Hydrostatic Test Waters				twice per /discharge			
Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
pH, s.u.	6.0		9.0	TSS, mg/L		NA	60
TRC, mg/L		NA	.016	TPH, mg/L		NA	15
Benzene, µg/L		NA	50	Toluene, µg/L		NA	175
Ethylbenzene, µg/L		NA	320	Total Xylene, µg/L		NA	33
Methyl Tertiary Butyl Ether (MTBE), µg/L		NA	1,840	Naphthalene, µg/L		NA	10
Ethanol, µg/L		NA	4,100				
Ethanol and Naphthalene are only required for tanks containing petroleum products consisting of Ethanol greater than 10%.							
	Receiving Stream			UT, Bull Run			
	Basin			Potomac River			
	Discharge Point (LONG)			77° 30' 15"			
	Discharge Point (LAT)			38° 47' 57"			

Problems identified at last inspection: **November 3, 2006**

Corrected

Not Corrected

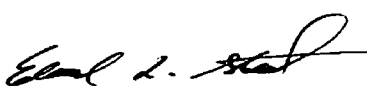
- As discussed at the time of inspection, install gravel along the outfall 001 to stabilize and prevent further erosion. Provide DEQ with documentation once the work has been completed.**

☒ [X]

☐ []

Virginia Department of Environmental Quality

FOCUSED CEI TECH/LAB INSPECTION REPORT

FACILITY NAME: Sunoco- Manassas Terminal		INSPECTION DATE: March 29, 2013		
		INSPECTOR: S. Allen		
PERMIT No.: VA0087858		REPORT DATE: April 25, 2013		
TYPE OF FACILITY: <input type="checkbox"/> Municipal <input type="checkbox"/> Major <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Federal <input type="checkbox"/> Small Minor <input type="checkbox"/> HP <input type="checkbox"/> LP		TIME OF INSPECTION:	Arrival 0930	Departure 1115
		TOTAL TIME SPENT (including prep & travel)	10 hours	
PHOTOGRAPHS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		UNANNOUNCED INSPECTION? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
REVIEWED BY / Date: <div style="text-align: center; margin-top: 20px;">  4/26/13 </div>				
PRESENT DURING INSPECTION: John Humphreys – Sunoco Logistics North Central Complex Manager				
TYPE OF INSPECTION:				
Routine	X	Reinspection	Compliance/assistance/complaint	
Date of previous inspection:		November 3, 2006	Agency: DEQ/NRO	
Other:				
Storm Water P3 available and up dated?	YES	X	NO	
The latest SWPPP revision is currently under review.				
Outfalls Identified in SWP3?	YES	X	NO	
Site Map with Drainage and Flows available?	YES		NO	
Has there been any new construction? A retention pond collecting runoff from parking area and roads around the facility originally discharged through an outfall designated as Outfall 001. This pond has been removed and replaced with the lower tank farm and containment area. Outfall 001 receives stormwater discharge from the lower tank farm, Outfall 002 from the upper tank farm. Permit modification was approved in 2006.	YES	X	NO	
If yes, were the plans and specifications approved?	YES	X	NO	
If yes, was SWP3 plan amended?	YES	X	NO	
Quarterly Visual Results available with SWP3? Visual inspections are done with each discharge.	YES	X	NO	
Site Inspections performed and documented? (Minimum Quarterly) Site inspections are done daily, weekly, and monthly	YES	X	NO	

Training performed and documented?	YES	X	NO	
Comprehensive Site Evaluation and associated documents available? Last done 2-24-12; the 2013 inspection is scheduled	YES	X	NO	
Non-stormwater certification?	YES	X	NO	
Oil or other Hazardous Spills?	YES	X	NO	
Sampling Required and performed correctly, records available?	YES	X	NO	
OVERALL APPEARANCE OF FACILITY	GOOD	X	AVERAGE	POOR

Additional Stormwater Pollution Prevention Plan Requirements	YES	NO
Control Measures		
Storm Water Controls. The SWPPP shall include a description of stormwater management controls appropriate for the facility.	X	
Good Housekeeping. The permittee shall keep clean all exposed areas of the facility that are potential sources of pollutants to storm water discharges.	X	
Eliminating and Minimizing Exposure. To the extent practicable, industrial materials and activities shall be located inside or protected by a storm-resistant covering to prevent exposure to rain, snow, snowmelt and runoff pollutants to surface waters; and appropriate maintenance of such equipment and systems	X	
Preventive Maintenance. The permittee shall have a preventive maintenance program that includes regular inspection, testing, maintenance and repairing of all industrial equipment and systems to avoid breakdowns or failures that could result in leaks, spills and other releases. This program is addition to the specific BMP maintenance required under Part I.E.2 (Maintenance of BMPs).	X	
Spill Prevention and Response Procedures. The plan shall describe the procedures that will be followed for preventing and responding to spills and leaks.	X	
Routine Facility Inspections. Facility personnel who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility and who can also evaluate the effectiveness of BMPs shall regularly inspect all areas of the facility where industrial materials or activities are exposed to stormwater...At least one member of the Pollution Prevention Team shall participate in the routine facility inspections.	X	
Employee Training. The permittee shall implement a stormwater employee training program for the facility. The SWPPP shall include a schedule for all types of necessary training and shall document all training sessions and the employees who received this training.	X	
Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction, landscaping, site grading), or other factors, have a potential for soil erosion. The permittee shall identify and implement structural, vegetative and/or stabilization BMPs to prevent or control on-site and off-site erosion and sedimentation. Flow velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel if the flows would otherwise create erosive conditions.	X	

Management of Runoff. The plan shall describe the stormwater runoff management practices (i.e. permanent structural BMPs) for the facility.	X	
Maintenance. All BMPs identified in the SWPPP shall be maintained in effective operating condition. Storm water BMPs identified in the SWPPP shall be observed during active operation (i.e., during a storm water runoff event) to ensure that they are functioning correctly.	X	
Non-Storm Water Discharges. For facilities that discharge vehicle and equipment washwaters to the sanitary sewer system, the operator of the sanitary system and associated treatment plant shall be notified...If the washwaters are handled in another manner (e.g., hauled off-site), the disposal method shall be described and all pertinent documentation (e.g., frequency, volume, destination, etc.) shall be attached to the plan.	X	

SUMMARY

INSPECTION COMMENTS:

	I met Mr. Humphreys on site and we toured the facility. Photos by S Allen.
	Vehicles are occasionally washed on the pavement outside the shop. There is one storm water inlet in this area that has a straight pipe to outside the fence and discharges water over the hill. This inlet is covered with a mat during vehicle washing activities so wash water does not enter the drain. Wash water is contained and collected for disposal.
	The truck loading rack has trench drains in front and back. Storm water collected is transported to the collection tank and pumped to holding tanks/process water tanks. The water in the holding tanks is pumped out by recycling company as needed.
	The smaller above ground tanks used to hold additives have secondary containment. Water from the containment areas is sent to the holding tanks mentioned above.
	Ethanol is delivered by truck (station near top of site). Petroleum products delivered via pipeline.
	No additives are manufactured on site.
	The facility has an upper and a lower tank farm; each has a separate containment area. Water caught in the upper containment area flows through a pipe to Outfall 001, water from the lower containment area discharges through Outfall 002.
	The two outfalls are located right next to each other (photo 3). The discharge pipes both have valves that must be manually opened to discharge. Any water in the containment areas is visually inspected prior to allowing a manual discharge. Gravel has been installed to disperse the force of the water during discharges (photo 4).
	The ethanol tanks in the upper tank farm have a black mold growing on the on the outside (photo 5). The top of tanks is sprayed with Formula 9 to control the growth because is slippery. Plan to pressure wash the tank sides soon.
	I reviewed the SWPP and related records.
	I observed Mr. Twele run through calibration of the pH meter. We discussed sample collection and handling and documentation of QA/QC for compliance samples.

LABORATORY INSPECTION

PRESENT DURING INSPECTION:	Don Twele, John Humphreys - Sunoco Logistics
-----------------------------------	---

1. Do lab records include sampling date/time, analysis date/time, sample location, test method, test results, analyst's initials, instrument calibration and maintenance, and Certificate of Analysis? <input checked="" type="checkbox"/> Sampling Date/Time <input checked="" type="checkbox"/> Analysis Date/Time <input checked="" type="checkbox"/> Sample Location <input checked="" type="checkbox"/> Test Method <input checked="" type="checkbox"/> Test Results <input checked="" type="checkbox"/> Analyst's Initials <input checked="" type="checkbox"/> Instrument Calibration & Maintenance <input checked="" type="checkbox"/> Chain of Custody <input checked="" type="checkbox"/> Certificate of Analysis	
2. Are Discharge Monitoring Reports complete and correct? Month(s) reviewed: _____ 1st quarter 2012, 1st quarter 2011, 3rd quarter 2010	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Are sample location(s) according to permit requirements (after all treatment unless otherwise specified)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Are sample collection, preservation, and holding times appropriate; and is sampling equipment adequate?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Are grab and composite samples representative of the flow and the nature of the monitored activity?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. If analysis is performed at another location, are shipping procedures adequate? List parameters and name & address of contract lab(s): Toxicity, TOC, TPH, TSS J.R. Reed and Associates VELAP ID #460013 770 Pilot House Dr Newport News, VA 23606	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Are annual thermometer calibration(s) adequate?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Parameters evaluated during this inspection (attach checklists): <input checked="" type="checkbox"/> pH <input type="checkbox"/> Temperature <input type="checkbox"/> Total Residual Chlorine <input type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Biochemical Oxygen Demand <input checked="" type="checkbox"/> Total Suspended Solids <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Other (specify) _____ <u>Comments:</u>	

Permit #	VA0087895
----------	-----------

EFFLUENT FIELD DATA: No Discharge

Flow	<input type="text"/> MGD	Dissolved Oxygen	<input type="text"/> mg/L	TRC (Contact Tank)	<input type="text"/> mg/L
pH	<input type="text"/> S.U.	Temperature	<input type="text"/> °C	TRC (Final Effluent)	<input type="text"/> mg/L
Was a Sampling Inspection conducted? <input type="checkbox"/> Yes (see Sampling Inspection Report) <input checked="" type="checkbox"/> No					

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

1. Type of outfall:	<input checked="" type="checkbox"/> Shore based	<input type="checkbox"/> Submerged	Diffuser?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
2. Are the outfall and supporting structures in good condition?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Final Effluent (evidence of following problems):	<input type="checkbox"/> Sludge bar		<input type="checkbox"/> Grease		
	<input type="checkbox"/> Turbid effluent	<input type="checkbox"/> Visible foam	<input type="checkbox"/> Unusual color	<input type="checkbox"/> Oil sheen	
4. Is there a visible effluent plume in the receiving stream?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5. Receiving stream:	<input checked="" type="checkbox"/> No observed problems		<input type="checkbox"/> Indication of problems (explain below)		
Comments:					

REQUEST for CORRETIVE ACTION:

1. Staff must complete the IDC for the Oakton pH meter and keep copies with the storm water records. Please submit copy of the IDC to DEQ once completed.

NOTES and COMMENTS:

<ul style="list-style-type: none"> There was one instance on April 25, 2012, in which the pH result = 10.00 s.u. measured on site. Staff asked the contract laboratory to double check the pH. The laboratory's pH result was reported on the DMR (2nd Q 2012). I explained to Mr. Humphreys that the lab pH is not a valid result due to exceedence of the 15 minute hold time for pH analysis. The facility determined high pH to result from bad pH probe. Replaced probe, decided to purchase back-up pH meter. DEQ recommends every facility have a laboratory SOP which details sample collection and handling procedures for samples collected and shipped to outside laboratories, as well as sample collection and analysis procedures for field tests performed on site. This SOP should include Quality Assurance/Quality Control measures for the field tests as well as general good laboratory practices for samplers to follow.
--

ANALYST:	Don Twele	VPDES NO	VA0087858
----------	-----------	----------	-----------

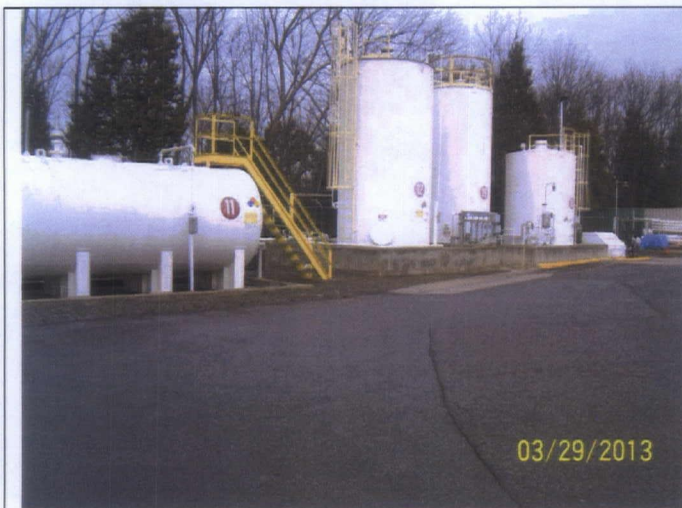
Parameter: Hydrogen Ion (pH)
Method: Electrometric
01/08

Meter: **Oakton pH 300**

METHOD OF ANALYSIS

See below	18 th Edition of Standard Methods-4500-H-B 21 st or On-Line Edition of Standard Methods-4500-H-B (00)		
pH is a method defined analyte so modifications are not allowed. [40 CFR Part 136.6]		Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for <u>each analyst/operator</u> performing the analysis? NOTE: Analyze 4 samples of known pH. May use external source of buffer (different lot/manufacture than buffers used to calibrate meter). Recovery for each of the 4 samples must be ± 0.1 SU of the known concentration of the sample. [SM 1020 B.1]		X
2)	Is the electrode in good condition (no chloride precipitate, etc.)? [2.b/c and 5.b]	X	
3)	Is electrode storage solution in accordance with manufacturer's instructions? [Mfr.]	X	
4)	Is meter calibrated on at least a daily basis using three buffers all of which are at the same temperature? [4.a] NOTE: Follow manufacturer's instructions. Calibrated with pH 4 and pH 10	X	
5)	After calibration, is a buffer analyzed as a check sample to verify that calibration is correct? Agreement should be within ± 0.1 SU. [4.a] checked with pH 4 and pH 10 after calibration	X	
6)	Do the buffer solutions appear to be free of contamination or growths? [3.1]	X	
7)	Are buffer solutions within their listed shelf life or have they been prepared within the last 4 weeks? [3.a]	X	
8)	Is the cap or sleeve covering the access hole on the reference electrode removed when measuring pH? [Mfr.]	X	
9)	For meters with ATC that also have temperature display, was the thermometer calibrated annually? [SM2550 B.1]	X	
10)	Is the temperature of buffer solutions and samples recorded when determining pH? [4.a]	X	
11)	Is sample analyzed within 15 minutes of collection? [40 CFR 136.6]	X	
12)	Was the electrode rinsed and then blotted dry between reading solutions (Disregard if a portion of the next sample analyzed is used as the rinse solution)? [4.a]	X	
13)	Is the sample stirred gently at a constant speed during measurement? [4.b]	X	
14)	Does the meter hold a steady reading after reaching equilibrium? [4.b]	X	
15)	Is a duplicate sample analyzed after every 20 samples if citing 18 th or 19 th Edition [1020 B.6] or daily for 20 th or 21 st Edition [Part 1020] Note: Not required for <i>in situ</i> samples.		NA
16)	Is pH of duplicate samples within 0.1 SU of the original sample? [Part 1020]		NA
17)	Is there a written procedure for which result will be reported on DMR (Sample or Duplicate) and is this procedure followed? [DEQ]		NA

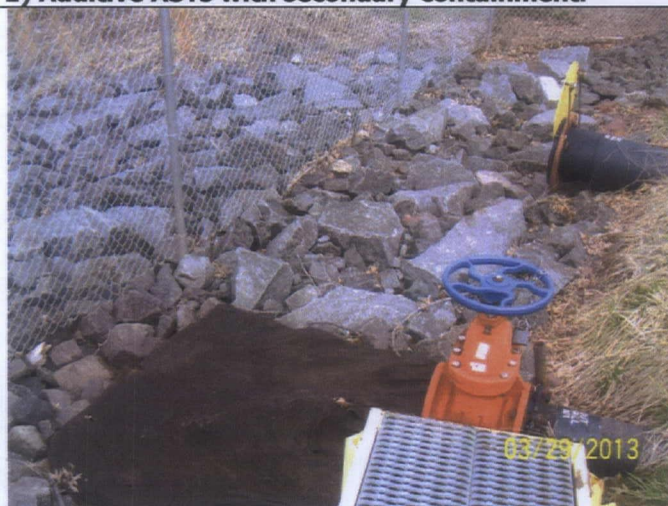
COMMENTS:	Method of Analysis - Staff has been relying on the Oakton operator manual for direction on pH meter calibration and analysis.
	9) NIST check 6/14/12.
PROBLEMS:	1) IDC has not been completed and documented. An email received from Mr. Humphreys on April 19, 2013 indicated that he anticipated having the IDC for all employees completed soon.



1) Additive ASTs with secondary containment.



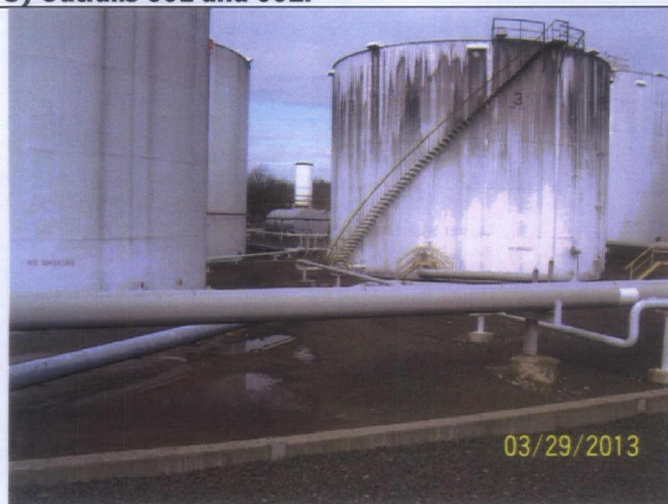
2) Storm water holding tank.



3) Outfalls 001 and 002.



4) Discharge path to receiving stream.



5) Ethanol tanks in the upper tank farm.



6) Ethanol receiving station.

ATTACHMENT 6

Planning Statement

To: Douglas Frasier
From: Rebecca Shoemaker

Date: 06 April 2015
Subject: Planning Statement for Sunoco Partners Marketing & Terminals - Manassas
Permit Number: VA0087858

Information for Outfall 001:

Discharge Type: industrial minor – stormwater associated with industrial activity
Discharge Flow: average 30-day flow of 0.25 MGD at Outfalls 001 and 002
Receiving Stream: Bull Run, UT
Latitude / Longitude: 38° 47' 56" / 77° 30' 14" (outfalls adjacent to one another)
Rivermile: 0.13
Streamcode: 1aXEF
Waterbody: VAN-A21R
Water Quality Standards: Class III, Section 7a, special standards g
Drainage Area: 0.08 square miles

1. Please provide water quality monitoring information for the receiving stream segment. If there is not monitoring information for the receiving stream segment, please provide information on the nearest downstream monitoring station, including how far downstream the monitoring station is from the outfall.

This facility discharges to an unnamed tributary to Bull Run that is designated by the streamcode XEF and has not been monitored or assessed.

Bull Run (BUL) is located approximately 0.8 miles downstream from Outfalls 001 and 002. The nearest downstream monitoring station is located within this segment of Bull Run; however, it is a DEQ fish tissue/sediment monitoring station that has not been monitored since the 2010 assessment.

The following is the water quality summary for this segment of Bull Run, as taken from the 2012 Integrated Report:

Class III, Section 7a, special stds. g.

DEQ monitoring stations located in this segment of Bull Run:

- *Fish tissue/sediment monitoring station 1aBUL013.40, near the Bull Run Recreation Area.*

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory.

The aquatic life use is considered fully supporting. The recreation and wildlife uses were not assessed.

The nearest DEQ station with ambient monitoring data is located within a segment of Bull Run that begins approximately 2.7 miles downstream from the outfalls. The following is the water quality summary for this segment of Bull Run, as taken from the 2012 Integrated Report:

Class III, Section 7a, special standards g

DEQ monitoring stations located in this segment of Bull Run:

- *Freshwater probabilistic monitoring station 1aBUL009.61, downstream from Route 28*
- *Ambient and biological monitoring station 1aBUL010.28, at Route 28*
- *Biological station 1aBUL011.12, at upstream of Route 616*

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. Additionally, an exceedance of the fish tissue value (TV) of 12 ppb for heptachlor epoxide that occurred in one species (flathead catfish) in 2001 at monitoring station 1aBUL010.28, noted by an observed effect. An observed effect is also noted for an exceedance of the fish tissue value (TV) of 110 ppb for total chlordane that occurred in one species (carp) in 2004.

Biological monitoring finds a benthic macroinvertebrate impairment, resulting in an impaired classification for the aquatic life use. A benthic TMDL for the Bull Run has been completed and approved.

The recreation and wildlife uses are considered fully supporting.

2. Does this facility discharge to a stream segment on the 303(d) list? If yes, please fill out Table A.

No.

3. Are there any downstream 303(d) listed impairments that are relevant to this discharge? If yes, please fill out Table B.

Table B. Information on Downstream 303(d) Impairments and TMDLs

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA	TMDL Schedule
Impairment Information in the 2012 Integrated Report							
Bull Run	Fish Consumption	PCBs	0.8 miles	No	---	---	2018
	Aquatic Life	Benthic Macroinvertebrates	2.7 miles	Bull Run Sediment 9/26/2006	5.8 tons sediment/year*	TSS concentration 60 mg/L --- 0.06347 MGD	---
Occoquan Reservoir	Aquatic Life	Dissolved Oxygen	11.5 miles	No**	---	---	N/A
Occoquan River	Recreation	<i>E. coli</i>	24 miles	No	---	---	2016

*Note that the 2009 Planning Statement for this facility erroneously included a WLA of 1.62 tons sediment/year, which corresponds to the stormwater WLA for this facility, as shown in Table D-1 in the TMDL document. The WLA for this facility's outfalls is 5.8 tons sediment/year, as shown in Table 7-1 in the TMDL document.

**A TMDL is not required for the Occoquan Reservoir dissolved oxygen impairment because other pollution control requirements are reasonably expected to result in the attainment of the dissolved oxygen criteria.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

Bull Run, which is located approximately 0.8 miles downstream from Outfalls 001 and 002, is listed with a PCB impairment. In support of the PCB TMDL that is scheduled for development by 2018, this industrial facility is a candidate for PCB monitoring. The SIC code for this facility (5171) is not specifically identified in the PCB Monitoring Guidance (09-2001) as a facility type that is subject to PCB monitoring, however the guidance allows other industrial facilities to be identified for monitoring based on additional information or staff recommendations. Total PCB results have been generated from sampling conducted at VPDES permitted facilities statewide since 2009. PCB data from Petroleum Bulk Station and Terminal facilities (5171) indicate that effluent from these facilities has potential to contain PCBs in concentrations greater than the Virginia water quality criteria (640 pg/L). Based on this information, DEQ staff recommends that this facility perform low-level PCB monitoring during the upcoming permit cycle. It is recommended that this facility collect two samples using EPA Method 1668, which is capable of detecting low-level concentrations for all 209 PCB congeners. PCB data generated using Method 1668 revisions A, B, and C are acceptable; however, data generated using version A is preferred.

5. Fact Sheet Requirements – Please provide information regarding any drinking water intakes located within a 5 mile radius of the discharge point.

There are no public water supply intakes located within five miles of Outfalls 001 and 002.

ATTACHMENT 7

Water Quality Criteria / Wasteload Allocation Analysis

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Sunoco - Manassas Terminal

Permit No.: VA0087858

Receiving Stream: Bull Run, UT

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO3) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	%	Mean Hardness (as CaCO3) =	50 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	%	90% Temp (Annual) =	25 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	%	90% Temp (Wet season) =	15 deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	%	90% Maximum pH =	8.4 SU
10% Maximum pH =	SU	30Q10 (Wet season) =	0 MGD	- 30Q10 Mix =	%	10% Maximum pH =	6 SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.6 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n						
Early Life Stages Present Y/N? =	y						

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile ^C	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin ^C	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	3.88E+00	6.56E-01	na	--	3.88E+00	6.56E-01	na	--	--	--	--	--	--	--	--	--	3.88E+00	6.56E-01	na	--
Ammonia-N (mg/l) (High Flow)	0	3.88E+00	1.25E+00	na	--	3.88E+00	1.25E+00	na	--	--	--	--	--	--	--	--	--	3.88E+00	1.25E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene ^C	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine ^C	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis(2-Chloroethyl) Ether ^C	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis(2-Chloroisopropyl) Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate ^C	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromoform ^C	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.8E+00	6.6E-01	na	--	1.8E+00	6.6E-01	na	--	--	--	--	--	--	--	--	--	1.8E+00	6.6E-01	na	--
Carbon Tetrachloride ^C	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane ^C	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^C	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	3.2E+02	4.2E+01	na	--	3.2E+02	4.2E+01	na	--	--	--	--	--	--	--	--	--	3.2E+02	4.2E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^C	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	1.8E-02
Copper	0	7.0E+00	5.0E+00	na	--	7.0E+00	5.0E+00	na	--	--	--	--	--	--	--	--	--	7.0E+00	5.0E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	2.2E+01	--	--	--	--	--	2.2E+01	5.2E+00	na	1.6E+04
DDD ^C	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	3.1E-03
DDE ^C	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	2.2E-03
DDT ^C	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	1.7E-01	1.7E-01	na	--
Dibenz(a,h)anthracene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	9.6E+02
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	1.9E+02
3,3-Dichlorobenzidine ^C	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	2.8E-01
Dichlorobromomethane ^C	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
1,2-Dichloroethane ^C	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	7.1E+03
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	1.0E+04
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^C	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
1,3-Dichloropropene ^C	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	2.1E+02
Dieldrin ^C	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	5.4E-04
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	4.4E+04
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	8.5E+02
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	1.1E+06
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	4.5E+03
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	2.8E+02
2,4-Dinitrotoluene ^C	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	3.4E+01
Dioxin 2,3,7,8- tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	5.1E-08
1,2-Diphenylhydrazine ^C	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	6.0E-02
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	3.0E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide ^C	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene ^C	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene ^C	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane																					
Alpha-BHC ^C	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane																					
Beta-BHC ^C	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane																					
Gamma-BHC ^C (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane ^C	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone ^C	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	4.9E+01	5.6E+00	na	--	4.9E+01	5.6E+00	na	--	--	--	--	--	--	--	--	--	4.9E+01	5.6E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride ^C	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	1.0E+02	1.1E+01	na	4.6E+03	1.0E+02	1.1E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.0E+02	1.1E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine ^C	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine ^C	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine ^C	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total ^C	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol ^C	0	3.2E+00	2.4E+00	na	3.0E+01	3.2E+00	2.4E+00	na	3.0E+01	--	--	--	--	--	--	--	--	3.2E+00	2.4E+00	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	na	4.0E+00
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	na	4.2E+03
Silver	0	1.0E+00	--	na	--	1.0E+00	--	na	--	--	--	--	--	--	--	--	--	1.0E+00	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	--	--	na	4.0E+01
Tetrachloroethylene ^C	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	--	--	na	4.7E-01
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	--	--	na	6.0E+03
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	na	2.8E-03
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	4.6E-01	7.2E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	--	--	na	7.0E+01
1,1,2-Trichloroethane ^C	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
Trichloroethylene ^C	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	--	--	na	3.0E+02
2,4,6-Trichlorophenol ^C	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
Zinc	0	6.5E+01	6.6E+01	na	2.6E+04	6.5E+01	6.6E+01	na	2.6E+04	--	--	--	--	--	--	--	--	6.5E+01	6.6E+01	na	2.6E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = $(0.25(WQC - \text{background conc.}) + \text{background conc.})$ for acute and chronic
= $(0.1(WQC - \text{background conc.}) + \text{background conc.})$ for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	3.9E-01
Chromium III	2.5E+01
Chromium VI	6.4E+00
Copper	2.8E+00
Iron	na
Lead	3.4E+00
Manganese	na
Mercury	4.6E-01
Nickel	6.8E+00
Selenium	3.0E+00
Silver	4.2E-01
Zinc	2.6E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

ATTACHMENT 8

June 2010 – September 2014 Effluent Data

Permit #:VA0087858

Facility:Sunoco - Manassas Terminal

Outfall	Rec'd	Parameter Description	QTY AVG	Lim Avg	QTY MAX	Lim Max	CONC MIN	Lim Min	CONC AVG	Lim Avg	CONC MAX	Lim Max
001	06-Jul-2010	FLOW	0.017	NL	0.4583	NL	NULL	*****	NULL	*****	NULL	*****
001	04-Oct-2010	FLOW	0.031	NL	0.5346	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Jan-2011	FLOW	0.027	NL	0.9674	NL	NULL	*****	NULL	*****	NULL	*****
001	04-Apr-2011	FLOW	0.025	NL	0.5346	NL	NULL	*****	NULL	*****	NULL	*****
001	05-Jul-2011	FLOW	0.032	NL	0.635	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Oct-2011	FLOW	0.035	NL	0.7892	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Jan-2012	FLOW	0.033	NL	0.5601	NL	NULL	*****	NULL	*****	NULL	*****
001	02-Apr-2012	FLOW	0.014	NL	0.331	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Jul-2012	FLOW	0.031	NL	0.6619	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Oct-2012	FLOW	0.025	NL	0.2546	NL	NULL	*****	NULL	*****	NULL	*****
001	02-Jan-2013	FLOW	0.033	NL	1.146	NL	NULL	*****	NULL	*****	NULL	*****
001	01-Apr-2013	FLOW	0.021	NL	0.5856	NL	NULL	*****	NULL	*****	NULL	*****
001	08-Jul-2013	FLOW	0.039	NL	0.5092	NL	NULL	*****	NULL	*****	NULL	*****
001	01-Oct-2013	FLOW	0.037	NL	1.273	NL	NULL	*****	NULL	*****	NULL	*****
001	06-Jan-2014	FLOW	0.03	NL	0.5346	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Apr-2014	FLOW	0.016	NL	0.2037	NL	NULL	*****	NULL	*****	NULL	*****
001	01-Jul-2014	FLOW	0.04	NL	1.0438	NL	NULL	*****	NULL	*****	NULL	*****
001	03-Oct-2014	FLOW	0.04	NL	0.6874	NL	NULL	*****	NULL	*****	NULL	*****
001	06-Jul-2010	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.1	15
001	04-Oct-2010	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.15	15
001	03-Jan-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.097	15
001	04-Apr-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.52	15
001	05-Jul-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<.50	15
001	03-Oct-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	03-Jan-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	02-Apr-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	03-Jul-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.92	15
001	03-Oct-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.5	15
001	02-Jan-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	01-Apr-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	08-Jul-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	01-Oct-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<.50	15
001	06-Jan-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	03-Apr-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<.50	15
001	01-Jul-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	03-Oct-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
001	06-Jul-2010	pH	NULL	*****	NULL	*****	6.78	6	NULL	*****	6.78	9

001	04-Oct-2010	pH	NULL	*****	NULL	*****	5.87	6	NULL	*****	9	9
001	03-Jan-2011	pH	NULL	*****	NULL	*****	6.4	6	NULL	*****	9	9
001	04-Apr-2011	pH	NULL	*****	NULL	*****	6.02	6	NULL	*****	9	9
001	05-Jul-2011	pH	NULL	*****	NULL	*****	6.02	6	NULL	*****	6.02	9
001	03-Oct-2011	pH	NULL	*****	NULL	*****	7.85	6	NULL	*****	7.85	9
001	03-Jan-2012	pH	NULL	*****	NULL	*****	6.03	6	NULL	*****	6.03	9
001	02-Apr-2012	pH	NULL	*****	NULL	*****	6.54	6	NULL	*****	6.54	9
001	03-Jul-2012	pH	NULL	*****	NULL	*****	7.29	6	NULL	*****	7.29	9
001	03-Oct-2012	pH	NULL	*****	NULL	*****	7.36	6	NULL	*****	7.36	9
001	02-Jan-2013	pH	NULL	*****	NULL	*****	6.51	6	NULL	*****	6.51	9
001	01-Apr-2013	pH	NULL	*****	NULL	*****	6.93	6	NULL	*****	6.93	9
001	08-Jul-2013	pH	NULL	*****	NULL	*****	6.07	6	NULL	*****	6.07	9
001	01-Oct-2013	pH	NULL	*****	NULL	*****	6.93	6	NULL	*****	6.93	9
001	06-Jan-2014	pH	NULL	*****	NULL	*****	6.02	6	NULL	*****	6.02	9
001	03-Apr-2014	pH	NULL	*****	NULL	*****	7.42	6	NULL	*****	7.42	9
001	01-Jul-2014	pH	NULL	*****	NULL	*****	6.77	6	NULL	*****	6.77	9
001	03-Oct-2014	pH	NULL	*****	NULL	*****	6.83	6	NULL	*****	6.83	9
001	06-Jul-2010	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<12.0	60
001	04-Oct-2010	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	12.8	60
001	03-Jan-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0	60
001	04-Apr-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0	60
001	05-Jul-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	6.9	60
001	03-Oct-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<1.0	60
001	03-Jan-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.1	60
001	02-Apr-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.6	60
001	03-Jul-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	3	60
001	03-Oct-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1.1	60
001	02-Jan-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1.2	60
001	01-Apr-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.3	60
001	08-Jul-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.5	60
001	01-Oct-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	3.3	60
001	06-Jan-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	7.5	60
001	03-Apr-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<1.0	60
001	01-Jul-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	5.8	60
001	03-Oct-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	4.1	60
001	03-Jan-2012	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
001	02-Apr-2012	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
001	11-Feb-2013	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
001	03-Apr-2014	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
002	06-Jul-2010	FLOW	0.01	NL	0.277	NL	NULL	*****	NULL	*****	NULL	*****
002	04-Oct-2010	FLOW	0.019	NL	0.3232	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Jan-2011	FLOW	0.017	NL	0.5848	NL	NULL	*****	NULL	*****	NULL	*****
002	04-Apr-2011	FLOW	0.015	NL	0.3232	NL	NULL	*****	NULL	*****	NULL	*****

002	05-Jul-2011	FLOW	0.02	NL	0.3848	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Oct-2011	FLOW	0.021	NL	0.4771	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Jan-2012	FLOW	0.02	NL	0.3386	NL	NULL	*****	NULL	*****	NULL	*****
002	02-Apr-2012	FLOW	0.009	NL	0.2001	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Jul-2012	FLOW	0.019	NL	0.4	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Oct-2012	FLOW	0.015	NL	0.1539	NL	NULL	*****	NULL	*****	NULL	*****
002	02-Jan-2013	FLOW	0.02	NL	0.6926	NL	NULL	*****	NULL	*****	NULL	*****
002	01-Apr-2013	FLOW	0.012	NL	0.354	NL	NULL	*****	NULL	*****	NULL	*****
002	08-Jul-2013	FLOW	0.024	NL	0.3078	NL	NULL	*****	NULL	*****	NULL	*****
002	01-Oct-2013	FLOW	0.022	NL	0.7695	NL	NULL	*****	NULL	*****	NULL	*****
002	06-Jan-2014	FLOW	0.02	NL	0.323	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Apr-2014	FLOW	0.012	NL	1231	NL	NULL	*****	NULL	*****	NULL	*****
002	01-Jul-2014	FLOW	0.024	NL	0.631	NL	NULL	*****	NULL	*****	NULL	*****
002	03-Oct-2014	FLOW	0.024	NL	0.4155	NL	NULL	*****	NULL	*****	NULL	*****
002	06-Jul-2010	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	4.5	15
002	04-Oct-2010	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.22	15
002	03-Jan-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.1	15
002	04-Apr-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.043	15
002	05-Jul-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<.50	15
002	03-Oct-2011	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	03-Jan-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	02-Apr-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	03-Jul-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.96	15
002	03-Oct-2012	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	0.5	15
002	02-Jan-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	01-Apr-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	08-Jul-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	01-Oct-2013	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	06-Jan-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	03-Apr-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<.50	15
002	01-Jul-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	03-Oct-2014	PETROLEUM HYDROCARBONS, TOTAL	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<0.50	15
002	06-Jul-2010	pH	NULL	*****	NULL	*****	6.78	6	NULL	*****	6.78	9
002	04-Oct-2010	pH	NULL	*****	NULL	*****	6.54	6	NULL	*****	9	9
002	03-Jan-2011	pH	NULL	*****	NULL	*****	6.54	6	NULL	*****	9	9
002	04-Apr-2011	pH	NULL	*****	NULL	*****	6.85	6	NULL	*****	9	9
002	05-Jul-2011	pH	NULL	*****	NULL	*****	6.19	6	NULL	*****	6.19	9
002	03-Oct-2011	pH	NULL	*****	NULL	*****	7.11	6	NULL	*****	7.11	9
002	03-Jan-2012	pH	NULL	*****	NULL	*****	6.59	6	NULL	*****	6.59	9
002	02-Apr-2012	pH	NULL	*****	NULL	*****	6.54	6	NULL	*****	6.54	9
002	03-Jul-2012	pH	NULL	*****	NULL	*****	6.91	6	NULL	*****	6.91	9
002	03-Oct-2012	pH	NULL	*****	NULL	*****	7.31	6	NULL	*****	7.31	9
002	02-Jan-2013	pH	NULL	*****	NULL	*****	7.27	6	NULL	*****	7.27	9

002	01-Apr-2013	pH	NULL	*****	NULL	*****	8.49	6	NULL	*****	8.49	9
002	08-Jul-2013	pH	NULL	*****	NULL	*****	6.05	6	NULL	*****	6.05	9
002	01-Oct-2013	pH	NULL	*****	NULL	*****	8.11	6	NULL	*****	8.11	9
002	06-Jan-2014	pH	NULL	*****	NULL	*****	6.07	6	NULL	*****	6.07	9
002	03-Apr-2014	pH	NULL	*****	NULL	*****	7.43	6	NULL	*****	7.43	9
002	01-Jul-2014	pH	NULL	*****	NULL	*****	6.91	6	NULL	*****	6.91	9
002	03-Oct-2014	pH	NULL	*****	NULL	*****	7.78	6	NULL	*****	7.78	9
002	06-Jul-2010	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<12.0	60
002	04-Oct-2010	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<12.0	60
002	03-Jan-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	12	60
002	04-Apr-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	96	60
002	05-Jul-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	18	60
002	03-Oct-2011	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<1.0	60
002	03-Jan-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	4.3	60
002	02-Apr-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	3.4	60
002	03-Jul-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	3	60
002	03-Oct-2012	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	60
002	02-Jan-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.1	60
002	01-Apr-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	2.7	60
002	08-Jul-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	4	60
002	01-Oct-2013	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	5.4	60
002	06-Jan-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	23	60
002	03-Apr-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	<1.0	60
002	01-Jul-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	4.3	60
002	03-Oct-2014	TSS	NULL	*****	NULL	*****	NULL	*****	NULL	*****	6.2	60
002	03-Jan-2012	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
002	02-Apr-2012	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
002	11-Feb-2013	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL
002	03-Apr-2014	TUa - ACUTE 48 HR STAT CERIODAPHNIA	NULL	*****	NULL	*****	NULL	*****	NULL	*****	1	NL

Outfalls 001/002

90th percentile of all pH data: 8.4

10th percentile of all pH data: 6.0

ATTACHMENT 9

Whole Effluent Toxicity Test Result Summaries

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY

Northern Virginia Regional Office

13901 Crown Court

Woodbridge, VA 22193

(703) 583-3800

SUBJECT: TOXICS MANAGEMENT PROGRAM (TMP) DATA REVIEW
Sunoco - Manassas Terminal (VA0087858)
REVIEWER: Douglas Frasier
DATE: 1 April 2015

PREVIOUS REVIEW: 22 February 2013

DATA REVIEWED:

This review covers the fourth (4th) annual acute toxicity test for Outfalls 001 and 002 conducted in February 2014.

DISCUSSION:

The results of this acute toxicity test, along with the results of all previous toxicity tests are summarized in Tables 1 and 2.

The acute toxicity of the effluent sample was determined with a 48-hour static test using *C. dubia* as the test species. The acute tests yielded a LC₅₀ of >100% effluent; thus, passed the acute toxicity criterion for both Outfalls.

CONCLUSION:

The acute toxicity tests are valid and the test results acceptable. The test results indicate that the effluent samples from Outfall 001 and Outfall 002 exhibit no acute toxicity to the test species.

BIOMONITORING RESULTS
Sunoco Logistics Manassas Terminal (VA0087858)

Table 1
Summary of Toxicity Test Results for Outfall 002
(designated as Outfall 001 prior to February 2005)

TEST DATE	TEST TYPE/ORGANISM	LC50 (%)	% SURV	LAB	REMARKS
11/01/95	Acute <i>C. dubia</i>	>100	100	JRA	1st semiannual
11/01/95	Acute <i>P. promelas</i>	>100	100	JRA	
12/20/95	Acute <i>C. dubia</i>	>100	100	JRA	2nd semiannual
12/20/95	Acute <i>P. promelas</i>	>100	100	JRA	
06/26/96	Acute <i>C. dubia</i>	>100	100	JRA	3rd semiannual
06/26/96	Acute <i>P. promelas</i>	>100	100	JRA	
10/29/96	Acute <i>C. dubia</i>	>100	100	JRA	4th semiannual
10/29/96	Acute <i>P. promelas</i>	>100	100	JRA	
10/01/97	Acute <i>P. promelas</i>	>100	95	CBI	1st annual
1/20/99	Acute <i>C. dubia</i>	>100	100	JRA	2nd annual
7/23/99	Acute <i>P. promelas</i>	>100	95	JRA	3 rd annual
Permit reissued January 26, 2000					
3/23/00	Acute <i>C. dubia</i>	25	0	JRA	1 st annual
4/18/00	Acute <i>C. dubia</i>	32	25	JRA	retest
12/20/00	Acute <i>C. dubia</i>	>100	100	JRA	1st semiannual
12/20/00	Acute <i>P. promelas</i>	>100	100	JRA	
3/6/01	Acute <i>C. dubia</i>	>100	100	JRA	2nd semiannual
3/6/01	Acute <i>P. promelas</i>	>100	100	JRA	
12/12/01	Acute <i>C. dubia</i>	>100	100	JRA	3rd semiannual
12/12/01	Acute <i>P. promelas</i>	>100	95	JRA	
3/14/02	Acute <i>C. dubia</i>	>100	100	JRA	4th semiannual
3/14/02	Acute <i>P. promelas</i>	>100	100	JRA	
08/30/02	Acute <i>C. dubia</i>	11.2	0	JRA	2nd annual
10/17/02	Acute <i>C. dubia</i>	>100	100	JRA	Retest
04/08/23	Acute <i>P. promelas</i>	>100	100	JRA	3rd annual
Permit Reissued February 23, 2005					
03/24/05	Acute <i>C. dubia</i>	>100	100	JRA	1st annual
01/19/06	Acute <i>C. dubia</i>	>100	100	JRA	2nd annual
2/22/07	Acute <i>C. dubia</i>	>100	100	JRA	3rd annual
01/15/08	Acute <i>C. dubia</i>	>100	100	JRA	4 th annual
01/09/09	Acute <i>C. dubia</i>	>100	100	JRA	5 th annual
Permit Reissued 11 May 2010					
03/02/11	Acute <i>C. dubia</i>	>100	100	JRA	1st annual
02/17/13	Acute <i>C. dubia</i>	>100	100	JRA	2 nd annual
01/24/13	Acute <i>C. dubia</i>	>100	100	JRA	3 rd annual
02/19/14	Acute <i>C. dubia</i>	>100	100	JRA	4 th annual

Table 2
Summary of Toxicity Test Results for Outfall 001

TEST DATE	TEST TYPE/ORGANISM	LC50 (%)	% SURV	LAB	REMARKS
<i>Permit Reissued 11 May 2010</i>					
03/02/11	Acute <i>C. dubia</i>	>100	100	JRA	1 st annual
02/17/12	Acute <i>C. dubia</i>	>100	100	JRA	2 nd annual
01/24/13	Acute <i>C. dubia</i>	>100	100	JRA	3 rd annual
02/19/14	Acute <i>C. dubia</i>	>100	100	JRA	4 th annual

Boldfaced values indicate the test results fail the toxicity criterion.

ABBREVIATION: % SURV - Percent survival in 100% effluent
 JRA - James R. Reed & Associates
 CBI - Coastal Bioanalysts

ATTACHMENT 10

Statistical Analysis of Previous WET Results

4/14/2015 12:13:15 PM

Facility = Sunoco Manassas Terminal

Chemical = Acute Toxicity - C. dubia

Chronic averaging period = 4

WLAa = 3

WLAc =

Q.L. = 1

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 6

Expected Value = 1

Variance = .36

C.V. = 0.6

97th percentile daily values = 2.43341

97th percentile 4 day average = 1.66379

97th percentile 30 day average = 1.20605

< Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

1
1
1
1
1
1
1

ATTACHMENT 11

Calculated Compliance Endpoints for WET Requirements

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
59															
60		Page 2 - Follow the directions to develop a site specific CV (coefficient of variation)													
61															
62		IF YOU HAVE AT LEAST 10 DATA POINTS THAT					Vertebrate			Invertebrate					
63		ARE QUANTIFIABLE (NOT "<" OR ">")					LC ₂₅ Data			LC ₂₅ Data					
64		FOR A SPECIES, ENTER THE DATA IN EITHER					or			or					
65		COLUMN "G" (VERTEBRATE) OR COLUMN					LC ₅₀ Data	LN of data		LC ₅₀ Data	LN of data				
66		"J" (INVERTEBRATE). THE 'CV' WILL BE					*****			*****					
67		PICKED UP FOR THE CALCULATIONS					1			1					
68		BELOW. THE DEFAULT VALUES FOR eA,					2			2					
69		eB, AND eC WILL CHANGE IF THE 'CV' IS					3			3					
70		ANYTHING OTHER THAN 0.6.					4			4					
71							5			5					
72							6			6					
73							7			7					
74		Coefficient of Variation for effluent tests					8			8					
75							9			9					
76		CV =	0.6 (Default 0.6)				10			10					
77							11			11					
78		δ^2 =	0.3074847				12			12					
79		δ =	0.554513029				13			13					
80							14			14					
81		Using the log variance to develop eA					15			15					
82		(P. 100, step 2a of TSD)					16			16					
83		Z = 1.881 (97% probability stat from table					17			17					
84		A =	-0.88929666				18			18					
85		eA =	0.410944886				19			19					
86							20			20					
87		Using the log variance to develop eB													
88		(P. 100, step 2b of TSD)					St Dev	NEED DATA	NEED DATA	St Dev	NEED DATA	NEED DATA			
89		δ_A^2 =	0.086177696				Mean	0	0	Mean	0	0			
90		δ_A =	0.293560379				Variance	0	0.000000	Variance	0	0.000000			
91		B =	-0.50909823				CV	0		CV	0				
92		eB =	0.601037335												
93															
94		Using the log variance to develop eC													
95		(P. 100, step 4a of TSD)													
96															
97		δ^2 =	0.3074847												
98		δ =													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
110	Page 3 - Follow directions to develop a site specific ACR (Acute to Chronic Ratio)															
111																
112	To determine Acute/Chronic Ratio (ACR), insert usable data below. Usable data is defined as valid paired test results,															
113	acute and chronic, tested at the same temperature, same species. The chronic NOEC must be less than the acute															
114	LC ₅₀ , since the ACR divides the LC ₅₀ by the NOEC. LC ₅₀ 's > 100% should not be used.															
115																
116																
117	Table 1. ACR using Vertebrate data								Convert LC₅₀'s and NOEC's to Chronic TU's							
118									for use in WLA.EXE							
119									ACR used: 10							
120	Set #	LC₅₀	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use								
121	1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	Enter LC ₅₀	TUc	Enter NOEC	TUc				
122	2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	1	NO DATA		NO DATA				
123	3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	2	NO DATA		NO DATA				
124	4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	3	NO DATA		NO DATA				
125	5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	4	NO DATA		NO DATA				
126	6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	5	NO DATA		NO DATA				
127	7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	6	NO DATA		NO DATA				
128	8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	7	NO DATA		NO DATA				
129	9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	8	NO DATA		NO DATA				
130	10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	9	NO DATA		NO DATA				
131									10	NO DATA		NO DATA				
132	ACR for vertebrate data:								0	11	NO DATA		NO DATA			
133									12	NO DATA		NO DATA				
134	Table 1. Result:				Vertebrate ACR				0	13	NO DATA		NO DATA			
135	Table 2. Result:				Invertebrate ACR				0	14	NO DATA		NO DATA			
136									Default to 10	15	NO DATA		NO DATA			
137										16	NO DATA		NO DATA			
138	Table 2. ACR using Invertebrate data									17	NO DATA		NO DATA			
139										18	NO DATA		NO DATA			
140	Set #	LC₅₀	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use	19	NO DATA		NO DATA				
141	1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	20	NO DATA		NO DATA				
142	2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA	If WLA.EXE determines that an acute limit is needed, you need to convert the TUc answer you get to TUa and then an LC ₅₀ , enter it here:							
143	3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
144	4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
145	5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
146	6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
147	7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
148	8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
149	9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
150	10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA								
151																
152																
153	ACR for vertebrate data:								0							
154																
155																
156																
157	DILUTION SERIES TO RECOMMEND															
158	Table 4.				Monitoring		Limit									
159					% Effluent	TUc	% Effluent	TUc								
160	Dilution series based on data mean				100	1.0										
161	Dilution series to use for limit						69	1.4492754								
162	Dilution factor to recommend:				0.5		0.8306624									
163																
164	Dilution series to recommend:				100.0	1.00	100.0	1.00								
165					50.0	2.00	83.1	1.20								
166					25.0	4.00	69.0	1.45								
167					12.5	8.00	57.3	1.74								
168					6.25	16.00	47.6	2.10								
169	Extra dilutions if needed				3.12	32.05	39.5	2.53								
170					1.56	64.10	32.9	3.04								
171																
172																

Cell: I9

Comment:

This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: K18

Comment: This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: J22

Comment: Remember to change the "N" to "Y" if you have ratios entered, otherwise, they won't be used in the calculations.

Cell: C40

Comment:

If you have entered data to calculate an ACR on page 3, and this is still defaulted to "10", make sure you have selected "Y" in cell E21.

Cell: C41

Comment: If you have entered data to calculate an effluent specific CV on page 2, and this is still defaulted to "0.6", make sure you have selected "Y" in cell E20.

Cell: L48

Comment:

See Row 151 for the appropriate dilution series to use for these NOEC's.

Cell: G62

Comment:

Vertebrates are:

Pimephales promelas

Oncorhynchus mykiss

Cyprinodon variegatus

Cell: J62

Comment:

Invertebrates are:

Ceriodaphnia dubia

Mysidopsis bahia

Cell: C117

Comment: Vertebrates are:

Pimephales promelas

Cyprinodon variegatus

Cell: M119

Comment: The ACR has been picked up from cell C34 on Page 1. If you have paired data to calculate an ACR, enter it in the tables to the left, and make sure you have a "Y" in cell E21 on Page 1. Otherwise, the default of 10 will be used to convert your acute data.

Cell: M121

Comment: If you are only concerned with acute data, you can enter it in the NOEC column for conversion and the number calculated will be equivalent to the TU_a. The calculation is the same: $100/\text{NOEC} = \text{TU}_c$ or $100/\text{LC50} = \text{TU}_a$.

Cell: C138

Comment: Invertebrates are:

Ceriodaphnia dubia

Mysidopsis bahia

ATTACHMENT 12

Public Notice

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of industrial stormwater into a water body in Prince William County, Virginia.

PUBLIC COMMENT PERIOD: September 12, 2015 to October 13, 2015

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Stormwater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Sunoco Partners Marketing & Terminals, L.P.
10315 Balls Ford Road, VA 20109
VA0087858

PROJECT DESCRIPTION: Sunoco Partners Marketing & Terminals, L.P. has applied for a reissuance of a permit for the private Manassas Terminal. The applicant proposes to release industrial stormwater into a water body. There is no sludge generated or treated at this facility. The facility proposes to release the stormwater in an unnamed tributary of Bull Run in Prince William County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, total suspended solids and total petroleum hydrocarbons. The facility will also monitor for total Kjeldahl nitrogen, nitrate+nitrite, total nitrogen, total phosphorus, polychlorinated biphenyls and whole effluent toxicity.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by hand-delivery, email, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the draft permit and application at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Douglas Frasier

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3873 Email: Douglas.Frasier@deq.virginia.gov Fax: (703) 583-3821